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SPRAY GUN

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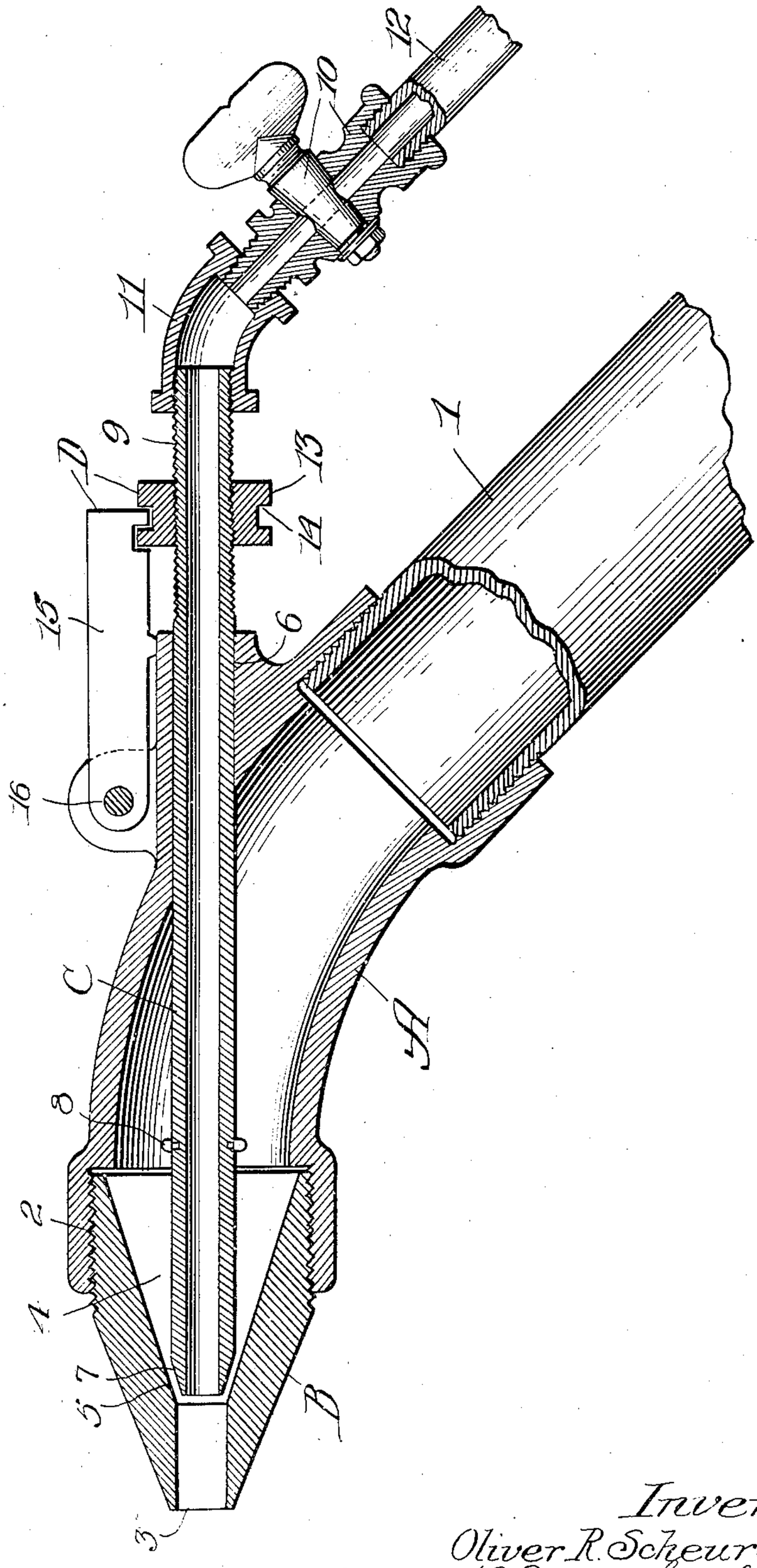

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SPRAY GUN

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4 Claims. (Cl. 299—140)

This invention relates to a spray-gun, and more particularly to a spray-gun adapted to apply heavy liquid material, such as emulsified asphalt loaded with cork, to the walls of a structure.

The primary object of the invention is to provide a simple and relatively inexpensive spray-gun which can be accurately adjusted and readily cleaned in the event of a stoppage.

Another object of the invention is to arrange the air supply tube and nozzle so that together they form a valve which regulates the liquid material passing through the gun.

Still another object of the invention is to provide a smooth passage for the liquid material through the gun so as to reduce the danger of material becoming compacted at any point.

The invention is illustrated in a preferred embodiment in the accompanying drawing, in which A designates a body-member; B, a nozzle serving also as a valve seat; C, an air-tube; and D, adjusting means.

The body-member A is in the form of a curved coupling which connects the liquid-supply pipe 1 to the nozzle B. It will be noted that the inside diameter of the pipe 1 is substantially the same as the inside diameter of the body-member A so that material may flow smoothly to the nozzle. The nozzle B makes a threaded connection with the body-member A, as indicated at 2. This permits the nozzle to be unscrewed for cleaning and in the event that a stoppage cannot be corrected in the simple manner described below. It has been found that where the gun is to be used for an asphaltic material heavily impregnated with cork, the orifice 3 may be about three-eighths of an inch in diameter. Inside the nozzle is a chamber 4 which tapers down uniformly from the largest diameter of the body-member A to the orifice 3. The inner end 5 of this constricted opening serves as a valve seat and cooperates with the air-tube C to regulate the flow of material from the pipe 1 through the orifice 3.

The air-tube C extends through a wall of the body-member, as indicated at 6, and is slidably mounted therein so that the chamfered end 7 of the tube may seat in the nozzle. A number of detents 8 are provided to limit the outward travel of the air-tube from the body-member. The rear end of the tube C is threaded, as indicated at 9, and is connected to an air cock 10 by means of a pipe coupling 11. The air cock controls the supply of compressed air from a hose 12.

The adjusting means for the liquid valve has a finger nut 13 which is threaded to the tube C. The nut has a circumferential groove 14 which is adapted to be engaged by a latch member 15 which is pivoted to the body-member A, as indicated at 16. Thus it will be understood that by rotating the nut 13, a micrometer-like adjustment may be obtained on the valve in the nozzle.

One of the principal difficulties with the spray-guns heretofore used in this type of work is the difficulty of relieving stoppages caused by solid particles, cork or the like, becoming lodged in the nozzle. With the present device, in the event of a stoppage, the operator merely opens the cock 10 all the way and raises the latch 15 which permits the air-tube to be slid back and forth and thereby blow out any compacted solid material which has become wedged in the nozzle. As soon as the nozzle is free, the latch 15 may be dropped back in position so as to provide the same adjustment that was used before the cleaning operation.

By arranging the main air supply tube as shown, several important advantages are obtained. As explained above, it acts as a regulating valve, and can also be used as a shut-off valve. The material is usually admitted to the body-member A from the pipe 1 under considerable pressure. The air jet passing through the orifice of the nozzle, during operation of the device, produces a suction in the nozzle that facilitates the flow of the material being sprayed.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom for some modifications will be obvious to those skilled in the art.

I claim:

1. A spray-gun for heavy liquids comprising: a hollow curved body-member of substantially uniform diameter connecting a liquid-supply pipe to a nozzle; an air-tube having one end extending through a wall of the body-member and seating in the nozzle so as to form a liquid-control valve for the chamber of said body-member, said air-tube being slidably mounted for limited movement with respect to said nozzle; a rotatable grooved nut threaded to the air-tube; and a releasable latch mounted on the body-member having a detent engaging the groove in said nut for holding the air-tube releasably in a desired position with respect to the nozzle.

2. A device as specified in claim 1, in which the nozzle is threaded to the inside of the body-member and its inner chamber is tapered uniformly from the largest diameter of said body-member to the seat for the air-tube.

3. A spray-gun for heavy liquids comprising: a hollow body-member having at one end a large opening adapted to communicate with a liquid-supply pipe; a nozzle removably secured to the opposite end of said body-member; an air-tube slidably extending into the body-member with its inner end seating in said nozzle to form a valve for the chamber; an exposed latch, mounted on said body-member for holding said air-tube in adjusted position, said latch being releasable to permit the air-tube to be reciprocated with respect to the nozzle; and a nut rotatably threaded to said air-tube and engaging said latch to permit the valve opening to be regulated accurately while the air-tube is in latched position.

4. A spray-gun for heavy liquids comprising: a hollow curved body-member of substantially uniform diameter connecting a liquid-supply pipe to a nozzle; an air-tube having one end extending through the top wall of said body-member and seating in the nozzle to form a liquid-control valve for the chamber of the body-member, said air-tube being slidably mounted for limited movement with respect to said nozzle and having an exposed threaded shank; a nut threaded to said exposed shank; and a pivotally mounted latch on said body member releasably engaging said nut to hold the air-tube in a desired position.

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